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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,781	03/03/2004	Byoung Yull Yang	1594.1334	3217

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EXAMINER
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LU, JIPING

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/790,781

Applicant(s)

YANG ET AL.

Examiner

Jiping Lu

Art Unit

3749

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14, 16-29 and 31-35 is/are pending in the application.
- 4a) Of the above claim(s) 1-7 and 31-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-14, 16-18 and 25-29 is/are rejected.
- 7) ☒ Claim(s) 19-24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Claims 1-7 and 31-35 are withdrawn. Claims 15 and 30 are canceled. Claims 8-14 and 16-29 are pending.

#### ***Claim Rejections - 35 USC § 112***

2. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 calls for two ducts to supply air to the clothes chamber at two different pressures. However, according to specification, the air from both ducts 112, 302 is supplied from a single air source 218. It is not seen how the pressure could be different between two ducts.

#### ***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hachiman et al. (Japanese patent publication No. 2002-85898) in view of Taylor et al. (U. s. pat. 6,312,507) or Sun et al. (U. S. Pat. 6,447,731) and Watanabe (JP02-087175) or Hiromachi (JP 2002-282346).
5. Hachiman et al. show a clothes dryer with accommodating chamber 6, a duct (not numbered, between 2 and 6) to supply heated air into the chamber 6, a duct (not numbered ,

Art Unit: 3749

between 3 and 6) for supply ozone into the chamber 6, a chamber heater 2, a chamber ozonizer 3, and a controller 4 to control the heater 2 and ozonizer 3. However, Hachiman et al. do not show an ozonizer for automatically supplying ozone into the chamber when the detected odor is greater than an odor reference value and an ozone disposer to remove ozone from the air. Taylor et al. teach a concept of using a sensor for detecting the odor and activating the ion generator when sensed odor exceeds a predetermined value same as claimed (see abstract). Sun et al. teach a concept of using a sensor 13 for detecting the odor and automatically activate ozone generator 17 based on the detected contamination extent same as claimed. Watanabe or Hiromachi teaches a concept of using ozone filter 3 for removing ozone in the exhausted air same as claimed.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the clothes dryer of Hachiman et al. with an odor sensor and to automatically control the ozonizer based on the detected odor value as taught by Taylor et al. or Sun et al. and to further provide the clothes dryer of Hachiman et al. with an ozone disposer as taught by Watanabe or Hiromachi in order to improve the cleaning efficiency.

6. Claims 14, 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dhaemers (U. S. Pat. 5,546,678) in view of Taylor et al. (U. s. pat. 6,312,507) or Sun et al. (U. S. Pat. 6,447,731) and Watanabe (JP02-087175) or Hiromachi (JP 2002-282346).

Dhaemers shows a clothes dryer comprising a chamber 608, a humidifier (Col. 3, lines 14-16), a heater 628, a blower 624 for circulating an atmosphere of the chamber, a filter 623 positioned between the chamber 608 and the blower 624, sensor 112, 113 and a control unit 635 which are arranged same as claimed. However, Dhaemers does not show an ozonizer and an ozonizer disposer and a control unit for automatically controlling the ozonizer based on the

Art Unit: 3749

detected odor. Taylor et al. teach a concept of using a sensor for detecting the odor and activating the ion generator when sensed odor exceeds a predetermined value same as claimed (see abstract). Sun et al. teach a concept of using a sensor 13 for detecting the odor and automatically activate ozone generator 17 based on the detected contamination extent same as claimed.

Watanabe or Hiromachi teaches a concept of using ozone filter 3 for removing ozone in the exhausted air same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the dryer of Dhaemers with an ozonizer and an odor sensor and to automatically control the ozonizer based on the detected odor value as taught by Taylor et al. or Sun et al. and to further provide the clothes dryer of Dhaemers with an ozone disposer as taught by Watanabe or Hiromachi in order to improve the cleaning efficiency.

7. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dhaemers (U. S. Pat. 5,546,678) in view of Taylor et al. (U. s. pat. 6,312,507) or Sun et al. (U. S. Pat. 6,447,731) and Watanabe (JP02-087175) or Hiromachi (JP 2002-282346) as applied to claim 16 above, and further in view of Eisen (U. S. Pat. 5,940,988) or Ou (U. s. Pat. 5,555,640).

The clothes dryer of Dhaemers as modified by Taylor et al. or Sun et al. and Watanabe or Hiromachi as above includes all that is recited in claim 29 except for the door with transparent window. Eisen teaches a clothes dryer with a door 56 having window 60 for viewing the chamber interior from outside same as claimed. Ou('640) teaches a clothes dryer with a door 15 having window 153 for viewing the chamber interior from outside same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was

Art Unit: 3749

made to further modify the clothes dryer of Dhaemers to include a door with windows as taught by Eisen or Ou in order to view the chamber interior from outside.

8. Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ou (U. S. Pat. 5,755,040) in view of Taylor et al. (U. s. pat. 6,312,507) or Sun et al. (U. S. Pat. 6,447,731) and Watanabe (JP02-087175) or Hiromachi (JP 2002-282346).

Ou shows a clothes dryer 1 with a clothes chamber 3, a first air duct G, a second air duct D, a chamber air heater 21, a plurality of vents 161, a door 15 with window which are arranged in the same manner as the broad claims. However, Ou does not show an ozonizer, an ozone disposer and a control unit for automatically controlling the ozonizer based on the detected odor. Taylor et al. teach a concept of using a sensor for detecting the odor and activating the ion generator when sensed odor exceeds a predetermined value same as claimed (see abstract). Sun et al. teach a concept of using a sensor 13 for detecting the odor and automatically activate ozone generator 17 based on the detected contamination extent same as claimed. Watanabe or Hiromachi teaches a concept of using ozone filter 3 for removing ozone in the exhausted air same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the clothes dryer of Ou with an ozonizer and an odor sensor and to automatically control the ozonizer based on the detected odor value as taught by Taylor et al. or Sun et al. and to further provide the clothes dryer of Ou with an ozone disposer as taught by Watanabe or Hiromachi in order to improve the cleaning efficiency.

9. Claims 14, 16-18, 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ou (U. S. Pat. 5,755,040) in view of Dhaemers (U. S. Pat. 5,546,678) and Taylor et al. (U. s. pat.

Art Unit: 3749

6,312,507) or Sun et al. (U. S. Pat. 6,447,731) and Watanabe (JP02-087175) or Hiromachi (JP 2002-282346).

Ou shows a clothes dryer 1 with a clothes chamber 3, a first internal air duct G, a second external air duct 2, a chamber air heater 21, a plurality of vents 161, a door 15 with window which are arranged in the same manner as claimed. However, Ou does not show a humidifier, an ozonizer, an ozone disposer and a control unit for automatically controlling the ozonizer based on the detected odor. Dhaemers teaches a clothes dryer with a humidifier for supply moisture to the internal chamber same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the clothes dryer of Ou with a humidifier as taught by Dhaemers in order to supply moisture to the internal chamber. Taylor et al. teach a concept of using a sensor for detecting the odor and activating the ion generator when sensed odor exceeds a predetermined value same as claimed (see abstract). Sun et al. teach a concept of using a sensor 13 for detecting the odor and automatically activate ozone generator 17 based on the detected contamination extent same as claimed. Watanabe or Hiromachi teaches a concept of using ozone filter 3 for removing ozone in the exhausted air same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the clothes dryer of Ou with an ozonizer and an odor sensor and to automatically control the ozonizer based on the detected odor value as taught by Taylor et al. or Sun et al. and to further provide the clothes dryer of Ou with an ozone disposer as taught by Watanabe or Hiromachi in order to improve the cleaning efficiency.

***Allowable Subject Matter***

10. Claims 19-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

11. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

12. Applicant's arguments with regard to 112 rejections filed 7/11/2005 have been fully considered but they are not persuasive. Claim 9 calls for a clothes dryer with "a first duct to supply air of first pressure into the chamber, a second duct to supply air of second pressure into the chamber; .... wherein the first pressure is higher than the second pressure". It is very clear that applicant claimed a clothes dryer with a first duct supplying air at a higher pressure than the air supplied by the second duct. There is no support in the disclosure that shows the pressure between the two ducts are different, i.e. the first duct to supply air of a first higher pressure only and the second duct to supply the air of second lower pressure only.

***Conclusion***

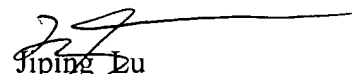
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jiping Lu whose telephone number is 571 272 4878. The examiner can normally be reached on Monday-Friday, 9:00 AM - 5:30 PM.



Art Unit: 3749

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on 571 272-4877. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jiping Lu  
Primary Examiner  
Art Unit 3749

J. L.